DATE OF DRILLING: 10-16-00 SITE ID: **CLIMATE ROOFING** LOGGED BY: R. Sengebush **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD BOREHOLE DIAMETER: 8"** BOREHOLE ID: B-1 PAGE <u>1</u> OF <u>1</u> **DRILLING METHOD:** Hollow Stem Auger SAMPLING METHOD: 3" diam, 5' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE CONSTRUCTION TOP OF CASING ELEV: NA CONSTRUCTION DEPTH (in feet) TPH **DEPTH TO WATER:** 8.1ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 13ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Native Fill **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Soil-hand dug to 3 ft. 0.0'-1.0' Fill (SW) Pea gravel and silt 1.0'-3.0' (SP) 10 YR Brownish-yellow; sand; fine to medium-grained; very well 2 0.0 sorted; damp; no apparent hydrocarbon odor present; (cuttings). Clean Dril 0.0 4 3.0'-8.0' 3.5' sample in split spoon. 3.0'-4.5' (ML) 10YR 0 yellowish-brown; silt; very well sorted; dry; no apparent 70% 0 hydrocarbon odor present. 4.5'-5.0' (SP) 10YR light brown; • sand; very fine-grained; very well sorted; dry; no apparent 6 hydrocarbon odor present. 5.0'-8.0' (SP) 10YR light brown; sand; fine to medium-grained very well sorted; dry; no apparent hydrocarbon odor present. 0.0 0 30% 0 10 **Bentonite Pellets** 8.0'-13.0' 2.5' sample in split spoon. 8.0'-8.3' (SP) 10YR (hydrated) light brown (as above); H2O saturated. 8.3'-10.5' (SW) 7000. 10YR Brown-gray (N5); sand; medium to coarse-grained; 12-12.5' poorly sorted; 5% gravel; saturated; strong petroleum odor. 2 (SW) (Measure DTW @ 1537, 8.1ft bgs). 110/230 6 TOTAL DEPTH: 13ft bgs 8 20



SITE ID: **CLIMATE ROOFING** LOGGED BY: W. Brown **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" nominal BOREHOLE ID: B-2 PAGE <u>1</u> OF <u>1</u> DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: 8.5-9.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 11ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Native Fill **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Loose dirt. 0.0'-0.5' (SC) Dark brown; silty clayey sand; unconsolidated; some organic matter; moist; no apparent hydrocarbon odor Cement Grout present; (cuttings). 2 0.5'-3.0' (SM) (7.5YR) Reddish-yellow; silty sand; unconsolidated; slightly moist; no apparent hydrocarbon odor 9/11/ present; (cuttings). 13/15 0.0 53% 3.0'-5.0' 1.1' sample in split spoon. 0.0'-0.1' (Cave-in) 0.0'-0.4' (SM) As above. 0.4'-1.1' (SC/SM) Silty clayey sand; 6/7/ very fine-grained; with disseminated CaCO3 cement; hard; 7/9 slightly moist; no apparent hydrocarbon odor present. 0.0 90% 5.0'-7.0' 1.8' sample in split spoon. 0.0'-0.4' (SM/SC) As 0.0 B-2 3/4/ above; (10YR) Brown. 0.4'-1.8' (SM/SP) Brown to light 6/5 brown (10YR) with one 2" thick dark brown zone @1.4'-1.6' 75 (SP) 90% Bentonite Pellets depth; sand with minor silt; very fine to fine-grained; unconsoli-(hydrated) dated; moist to very moist @ base; no apparent hydrocarbon 3/6/ odor present. 5/4 10 9 85% 7.0'-9.0' 1.8' sample in split spoon. 0.0'-0.2' (Cave-in) 0.2'-1.8' (SP) Brown to reddish yellow (7.5YR) at top to light brown-gray at base; sand; fine to medium-grained; well sorted; 2 unconsolidated; H2O saturated in lower 2/3; weak hydrocarbon odor at base. 9.0'-11.0' 1.7' sample in split spoon. 0.0'-1.7' (SP) Lightgray tan; sand; fine to medium-grained; grading to (SW). Gray (N3); sand with trace of gravel; fine to coarse-grained; poorly sorted: H2O saturated: very weak hydrocarbon odor. 6 8 TOTAL DEPTH: 11ft bgs 20



TECUMSEH PROFESSIONAL ASSOCIATES, INC.

DATE OF DRILLING:

10-31-00

DATE OF DRILLING: 10-25-00 SITE ID: **CLIMATE ROOFING** LOGGED BY: W. Brown **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" WELL ID: <u>B-3/FTW-13</u> PAGE <u>1</u> OF <u>1</u> **DRILLING METHOD:** Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery WELL/BOREHOLE PID Reading (ppmv) CONSTRUCTION TOP OF CASING ELEV: NA CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 15ft DATA Laboratory CASING: 0-5' 2" dia sch 40 PVC-flush threaded SCREEN: 5-15' 0.01slot 2" dia sch 40 PVC SURFACE COMPLETION: Standard 8x12 can w/ concrete pad **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Loose soil. Cement 0.0'-0.5' Concrete and other fill debris. (cuttings). 0.5'-1.0' (SM/SC) Dark brown; silty clayey sand; very finegrained. (cuttings). Bentonite Pellets 2 1.0'-3.0' (SM) Tan-brown (10YR); silty sand; very fine-(hydrated) grained; loose; no apparent hydrocarbon odor. (cuttings). 3.0'-5.0' 1.1' sample in split spoon. 0.0'-0.4' (SM/SC) Brown (10YR); silty clayey sand; very fine-grained; weak CaCO3 0.0 cement; grades to 0.4'-1.0' (SC). Brown (10YR); clavey sand • with silt; very fine-grained; dense to CaCO3 cement; grades to 8 1.0'-1.1' (**SM/SC**). As above. 6 5.0'-7.0' 1.9' sample in split spoon. 0.0'-0.2' (SM/SC) As 0.0 above. 0.2'-1.9' Coarsening downward sequence: 0.2'-0.6' (SM) Light brown (10YR); silty sand; very fine-grained; with 10-20 Silica Sand •0 MW-13 0.0 disseminated CaCO3 cement. 0.6'-0.9' (SM/SP) Tan (10YR); 9.0' sand with silt; very fine to fine-grained; unconsolidated; grades 10,000 (SP) to 0.9'-1.9' (SP). Tan-brown (10YR) with thin dark brown band 1100 ~1" thick at 1.5' depth; sand; fine to medium-grained; trace coarse-grained sand and pebbles; unconsolidated. >10,000 10 7.0'-9.0' 1.7' sample in split spoon. 0.0'-1.1' (SP/SW) Tanbrown; sand with ~5% gravel clasts; medium to coarse-grained; MW-13 grades to 1.1'-1.7' (SP) Dark gray (N3); sand; medium to 11.0' coarse; unconsolidated; H2O saturated below ~8' BSG; strong 2 Screen (SP) hydrocarbon odor present. 530/ 28.0 9.0'-11.0' 1.9' sample in split spoon. 0.0'-1.9' (SP) Dark gray MW-13 (N3) sand; fine to medium-grained; unconsolidated; hydrocarbon •0 13.0' 0 4 saturated with very strong hydrocarbon odor present. (SP/SW) 11.0'-13.0' 1.3' sample in split spoon. 0.0'-1.3' (**SP/SW**) Light brown; sand; medium to coarse-grained; H2O saturated. 6 13.0'-15.0' Cuttings. Indicate (SP/SW) as above. 8 TOTAL DEPTH: 15ft bgs 20



SITE ID: **CLIMATE ROOFING** LOGGED BY: W. Brown **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD BOREHOLE DIAMETER: 8"** BOREHOLE ID: B-4 PAGE 1 OF 1 **DRILLING METHOD:** Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 13ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Native Fill **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Dirt. 0.0'-0.5' (SM/SC) Dark brown; clayey silty sand; organic matter; unconsolidated; moist; no apparent hydrocarbon odor Cement Grout present; (cuttings). 2 0.5'-3.0' (SM) (7.5YR) Light reddish-brown; silty sand; unconsolidated; slightly moist; no apparent hydrocarbon odor 11/10 present; (cuttings). 29/24 0.0 3.0'-5.0' 1.4' sample in split spoon. 0.0'-0.4' (**SM**) 70% As above. 0.4'-1.4' (SM/SC) Brown (10YR); silty clayey; very fine-grained sand; dense CaCO3 cemented; slightly moist; no 3/12 apparent hydrocarbon odor present. /8 2.0 00% 5.0'-7.0' 2.0' sample in split spoon. 0.0'-0.1' (Cave-in) 0.1'-0.5' (SM/ML) Light tan; silt-sand; very fine-grained; slightly 0.0 2/4/ moist; grades to 0.5'-0.8' (SM/SC). As above; brown (10YR); 4/6 stage 2+ CaCO3 cement in nodules; dense. 0.8'-2.0' (SM) 750 90% Tan-light brown (10YR); sand with minor silt; very fine to finegrained; moist @ base; no apparent hydrocarbon odor present. 5/4/ B-4 220 /5 10.5 7.0'-9.0' 1.8' sample in split spoon. 0.0'-1.8' Coarsening down-10 Bentonite Pellets 00% SP/SW ward sequence starting with (SP) Tan-brown (10YR); sand; 1500 <5 (hydrated) fine-grained sand grading to medium-coarse-grained sand than 4/6/ (SW/SP); medium to coarse-grained sand with ~5% gravel and 9/10 2 pebble clasts; lower 1/2 of sample is H2O saturated; lower 1/3 B-4 70% is gray-brown and has accompanying moderate to strong 13' 1.0 (SP) hydrocarbon odor. 9.0'-11.0' 2.0' sample in split spoon. 0.0'-1.0' (SP/SW) Tan-4 brown/light gray as above; unconsolidated; H2O saturated; weak to moderate hydrocarbon odor. 1.0'-2.0' (SP/SW) Dark gray (N3); sand; medium to coarse-grained sand with minor finegrained sand; unconsolidated; hydrocarbon saturated-very 6 strong odor. (Color change across core sample is gradual. No pebbles or gravels in lower foot.) 11.0'-13.0' 1.4' sample in split spoon. 0.0'-1.0' (SP/SW) As 8 above; brown (10YR); sand with ~5% gravel/pebble clasts; medium to coarse-grained. 1.0'-1.4' (SP) Tan-brown (10YR); medium to fine-grained sand. 20 TOTAL DEPTH: 13ft bgs

DATE OF DRILLING:

10-31-00



SITE ID: **CLIMATE ROOFING** LOGGED BY: W. Brown **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" BOREHOLE ID: **B-5** PAGE <u>1</u> OF <u>1</u> **DRILLING METHOD:** Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 13ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Native Fill **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Dirt. 0.0'-1.0' (GM/SM) Brown (10YR); silty clayey sand with pea gravel; (cuttings). Cement Grout 2 1.0'-3.0' (SM) (7.5YR) Silty sand; very fine-grained; no apparent hydrocarbon odor present; (cuttings). 3.0'-5.0' 1.5' sample in split spoon. 0.0'-0.3' (GM) 7/13/ Gravel; (fill); cave-in. 0.3'-1.0' (SM) Reddish-yellow brown 15/26 0.0 (7.5YR); silty sand; very fine-grained; unconsolidated; grades 75% to1.0'-1.5' (SM/SC). Light brown; silty clayer sand; very finegrained; with disseminated CaCO3 cement. 14/14 5/4 6 5.0'-7.0' 1.8' sample in split spoon. 0.0'-0.3' (**SM**) As above. 2.0 90% 0.3'-1.1' (SM/SC) Brown (10YR); silty clayey sand; very finegrained; dense CaCO3 cemented (Stage 2+); dry; no apparent 0.0 hydrocarbon odor present. 1.1'-1.8' (SM) Reddish-brown 5/6/ 6/4 (7.5YR); silty clayey sand; very fine-grained; unconsolidated; 100% slightly moist; no apparent hydrocarbon odor present. 110 7.0'-9.0' 2.0' sample in split spoon. 0.0'-0.3' Cave-in. 0.3'-0.8' 8/7/ B-5 2200 (SP) Tan to light brown (10YR); sand; fine to medium-grained; 7/4 10.5 10 Bentonite Pellets unconsolidated; moist; grades to 0.8'-1.4'. (SP/SW) Tan-brown; 00% (SP) 2.5 sand with minor pebbles; fine to coarse-grained sand; 840 (hydrated) unconsolidated; H2O saturated; no apparent hydrocarbon odor 2/12 present. 1.4'-2.0' (SP) Light gray-tan; sand with minor pebbles; 12/11 2 B-5 medium to coarse-grained; unconsolidated; H2O saturated; 90% 13' 1.0 moderate to strong hydrocarbon odor present. (GW/ SW) 9.0'-11.0' 2.0' sample in split spoon. 0.0'-2.0' (SP) Medium 4 gray (N4) and lower 2" changes to tan brown; sand; mediumgrained; unconsolidated; H2O saturated; moderate hydrocarbon odor present which lessens in lower 2" substantially. 6 11.0'-13.0' 1.8' sample in split spoon. 0.0'-1.8' (SP/SW) Tanbrown; sand; medium to fine-grained with coarse-grained component; unconsolidated; H2O saturated; no apparent hydrocarbon odor. 8 20 TOTAL DEPTH: 13ft bgs

DATE OF DRILLING:

10-31-00



TECUMSEH PROFESSIONAL ASSOCIATES, INC.

SITE ID: **CLIMATE ROOFING** LOGGED BY: W. Brown **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD BOREHOLE DIAMETER: 8"** BOREHOLE ID: B-6 PAGE <u>1</u> OF <u>1</u> **DRILLING METHOD:** Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 13ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Native Fill **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Loose Sediment 0.0'-1.0' (SM/SC) Dark Brown; silty clayey sand; very finegrained; organic matter; some asphalt chunks; unconsolidated; Cement Grout moist; (cuttings). 2 1.0'-3.0' (SM) (7.5YR) Reddish-brown; silty sand with minor clay; slightly moist; (cuttings). 3.0'-5.0' 1.3' sample in split spoon. 0.0'-0.2' (Cave-in) 2/10/ 0.2'-0.8' (SM) Reddish-brown (7.5YR); silty sand; unconsoli-21/25 0.0 dated; slightly moist; no apparent hydrocarbon odor present. 65% 0.8'-1.3' (SM/SC) Brown (10YR); silty clayey very fine-1/9/ grained sand grading to (SC) clayeye very fine-grained sand at 8/8 base; dense; Stage 2+ CaCO3 cement; no aparent hydrocarbon 0.0 100% odor present. 5.0'-7.0' 2.0' sample in split spoon. 0.0'-0.4' (**SM/SC**) As 0.0 5/6/ above with CaCO3 cement; clayey silty sand. 0.4'-1.2' (SP) 6/7 Tan-brown (10YR); fine grading to medium-grained sand at 95% 7000 base; unconsolidated; slightly moist; grades to 1.2'-2.0' (SW) Tan-brown (10YR); sand with \leq 5% pebbles/gravel; fine to B-6 5/7/ 9000 10.0 coarse-grained; unconsolidated; slightly moist; no apparent 7/4 10 (SP) **Bentonite Pellets** hydrocarbon odor present. 95% 1700/ 350 (hydrated) 7.0'-9.0' 1.9' sample in split spoon. 0.0'-1.9' (**SP**) Tan-brown (10YR) at top grading to dark gravy (N2) and black at basal 0.4' 3/7/ 8/8 2 sand; medium to coarse-grained; unconsolidated; H2O saturated 80% in lower 2/3 of core; no apparent hydrocarbon odor at top but 4.0 very strong gasoline ordor at base; blackened zone is hydrocarbon saturated. 4 9.0'-11.0' 1.9' sample in split spoon. 0.0'-0.1' (**Slough**) 0.1'-1.9 (SP) Dark gray (N2); sand; fine to medium-grained; unconsolidated; H2O saturated; hydrocarbon saturated with very strong hydrocarbon odor; sediment near base is brown-gray with 6 lesser odor. 11.0'-13.0' 1.6' sample in split spoon. 0.0'-1.6' (**SP**) Medium to coarse-grained sand grading to (SW). Light brown color (10YR); medium to coarse-grained with ~5-10% pebbles/gravel; 8 H2O saturated; no apparent hydrocarbon odor present. 20 TOTAL DEPTH: 13ft bgs

11-1-00

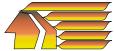
DATE OF DRILLING:



DATE OF DRILLING: 11-1-00 SITE ID: **CLIMATE ROOFING** LOGGED BY: W. Brown **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" BOREHOLE ID: **B-7** PAGE <u>1</u> OF <u>1</u> **DRILLING METHOD:** Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 11ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Native Fill **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Loose Sediment 0.0'-0.5' (SM/SC) Brown (10YR); clayey silty sand; organic matter; unconsolidated; moist; (cuttings). Cement Grout 2 0.5'-3.0' (SM) Reddish-brown (7.5YR); silty sand; very fine-grained; unconsolidated; moist; (cuttings). 3.0'-5.0' 1.8' sample in split spoon. 0.0'-0.3' (SM) As above. 2/10/ 0.3'-1.8' (SM) Fining downward sequence. 0.3'-1.0' (SC/ML) 21/25 0.0 Brown (10YR); clayey sand with abundant silt; very fine-65% grained; grades to 1.0'-1.8'. (SC) Clayey sand; plastic; medium dense; moist; no apparent hydrocarbon odor present. 3/5/ 7/7 6 5.0'-7.0' 1.9' sample in split spoon. 0.0'-0.7' (ML/CL) Brown 100% 0.0 (10YR); silt-clay; medium soft; plastic; slightly moist. 0.7'-1.9' (SM) Tan-brown (10YR); silty sand; very fine-grained; grading B-7 to (SP); tan-brown (10YR); fine-grained sand at base; unconsoli 2/4/ 9.0' 4/6 8 dated; no apparent hydrocarbon odor present. (SP) 85% Bentonite Pellets 0.0 7.0'-9.0' 1.7' sample in split spoon. 0.0'-0.2' (**Slough**) 0.2'-0.6' (hydrated) (SP) Tan (10YR); medium to coarse-grained sand; unconsolidat-4/6/ ed; H2O saturated. 0.6'-1.2' (SM) Tan (10YR); silty sand; very 13/12 10 0.0 fine to fine-grained. 1.2'-1.7' (SP) Tan (10YR); sand; medium 100% to coarse-grained; unconsolidated; H2O saturated. 9.0'-11.0' 2.0' sample in split spoon. 0.0'-1.1' (**SP**) As abvove. 2 1.1'-1.6' (SM) Tan-brown (10YR); silty sand; very fine-grained; unconsolidated; H2O saturated. 1.6'-2.0' (SW) Grading to (GW at base. Medium to coarse-grained sand matrix with increasing subrounded pebble/gravel clasts with depth; clasts to 3/4"; entire 4 core is H2O saturated. 6 TOTAL DEPTH: 11ft bgs 8 20



DATE OF DRILLING: 11-1-00 SITE ID: **CLIMATE ROOFING** LOGGED BY: W. Brown **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" WELL ID: B-8/FTW-14 PAGE 1 OF 1 **DRILLING METHOD:** Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE CONSTRUCTION TOP OF CASING ELEV: NA CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 15ft Laboratory CASING: 0-5' 2" dia sch 40 PVC-flush threaded SCREEN: 5-15' 0.01slot 2" dia sch 40 PVC SURFACE COMPLETION: Standard 8x12 can w/ concrete pad **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Loose soil. Cement 0.0'-1.0' Fill (?) (GM) Gravelly silty sand; (cuttings). 1.0'-3.0' (SM) Reddish-brown (7.5YR); silty sand; very finegrained; moist; (cuttings). Bentonite Pellets 2 3.0'-5.0' 1.3' sample in split spoon. 0.0'-0.3' (**SM**) As above. (hydrated) 0.3'-1.3' (SM/ML) Brown (10YR); dense; Stage (2+); CaCO3 cemented; no apparent hydrocarbon odor present. 5.0'-7.0' 1.9' sample in split spoon. 0.0'-0.4' (**SM/ML**) As 0.0 above wtih lesser cement. 0.4'-1.2' (SM) Tan-brown (10YR) and dark brown 1" thick zone at base; sand with silt; very fine-0.0 grained; unconsolidated; grades to 1.2'-2.0'. (SP) Tan-brown; 6 sand; medium-grained; overall coarsening downward sequence; 1.0 unconsolidated; very moist at base; no apparent hydrocarbon 10-20 Silica Sand odor present. B-8 7.0'-9.0' 1.7' sample in split spoon. 0.0'-0.2' (Cave-in) 0.2'-0.6' 9.0' 8 (SP) (**SP**) As above. 0.6'-1.3' (**SW**) (10YR) at top grading to (N2) 800 46/18 dark gray at base; sand with minor pebbles; fine to coarse-4,000 grained; H2O saturated near hydrocarbon saturation; very strong 10 hydrocarbon odor present. 00 9.0'-11.0' 2.0' sample in split spoon. 0.0'-0.7' (**SP**) Gray (N3); sand; very fine to fine-grained. 0.7'-1.5' (SP) Gray (N4); 13.0 sand; fine to medium-grained. 1.5'-2.0' (SP/SW) Light gray 2 brown; sand with ≤5% pebbles; fine to coarse-grained but 0.0 mostly medium-grained sand; unconsolidated; H2O saturated throughout; hydrocarbon odor strong at top, lessens with depth. 4 11.0'-13.0' 1.8' sample in split spoon. 0.0'-1.8' (**SP**) Brown (10YR); sand; medium to fine-grained; unconsolidated; H2O saturated; weak hydrocarbon odor decreases with depth. 6 13.0'-15.0' Cuttings suggest (SP) as above. 8 TOTAL DEPTH: 15ft bgs 20



SITE ID: **CLIMATE ROOFING** LOGGED BY: R. Sengebush **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" BOREHOLE ID: B-9 PAGE <u>1</u> OF <u>1</u> DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH **DEPTH TO WATER:** 7.5 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 15ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Fill with Bentonite. **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Loose Sediment 1.0'-3.0' (SM) Fill; brownish-yellow (10YR6/8); silty sand; very well sorted; damp; no apparent hydrocarbon odor present. Cement Grout 2 3.0'-5.0' 2.0' sample in split spoon. 3.0'-3.5' (SP) Sand; very well sorted; medium to fine-grained; damp. 3.5'-4.0' (SM) Silty sand; very well sorted; damp. ND 5.0'-7.0' 2.0' sample in split spoon. 5.0'-7.0' (SP) Sand; fine to medium-grained; very well sorted; damp; no apparent hydrocarbon odor present. 6 7.0'-9.0' 1.5' sample in split spoon. 7.0'-7.5' (SP) As above; ND H2O at 7.5'. 7.5'-9.0' (SW) Olive gray (5YR4/1) from 7.0'-8.8' and from 8.8'-9.0' is dark gray (N3); sand; medium to coarsegrained; moderate to poorly sorted; H2O saturated; strong petroleum odor present. Bentonite Pellets 344 (hydrated) 9.0'-11.0' 2.0' sample in split spoon. 9.0'-11.0' (SP) Dark gray 10 (N3); sand; medium-grained; well sorted; H2O saturated; strong 341 petroleum odor present. 11.0'-13.0' 1.0' sample in split spoon. 11.0'-12.0' (**SP/SW**) 2 Brown (10YR5/3); sand; medium to coarse-grained; moderately 338 sorted; H2O saturated; appears to be out of the gray petroleum stained sand with moderate odor. 195 13.0'-15.0' 1.0' sample in split spoon. 13.0'-14.0' (SP/SW) Brown (10YR5/3); sand; medium to coarse-grained; moderately sorted; H2O saturated; moderate odor present. 6 TOTAL DEPTH: 15ft bgs 8 **20**

11-29-00

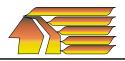
DATE OF DRILLING:



SITE ID: **CLIMATE ROOFING** LOGGED BY: R. Sengebush **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" BOREHOLE ID: B-10 PAGE <u>1</u> OF <u>1</u> DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery WELL/BOREHOLE PID Reading (ppmv) TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 15ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Fill with Bentonite. **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Fill. <u>0.0'-3.0'</u> (**SM**) Fill; dark gray; silty sand with pea gravel; damp; no apparent hydrocarbon odor present; (cuttings). Cement Grout 2 3.0'-5.0' 1.5' sample in split spoon. 0.0'-0.5' (SM) Yellowishbrown: silty sand: very well sorted: dary: no apparent hydrocarbon odor present. 0.5'-1.5' (ML) Tri-white spots; silt; laminated; partings 0.25" thick; dry; no apparent hydrocarbon odor ND present. 5.0'-7.0' 1.5' sample in split spoon. 0.0'-0.5' (ML) Brown to yellowish-brown (10YR); silt. 0.5'-1.5' (SP) (10YR); sand; 6 fine-grained; very well sorted; damp; no apparent hydrocarbon ND odor present. 7.0'-9.0' 1.5' sample in split spoon. 0.0-1.5' (**SP**) As above; fine to medium-grained; well sorted; no apparent hydrocarbon 36.1 odor present. 0.5'-1.5' (SW) (10YR); sand; medium to coarse-B-10 grained; moderately sorted; H2O saturated; no apparent hydro-10.0carbon odor present. 10 11.0' 81.2 (SW) 9.0'-11.0' 2.0' sample in split spoon. 0.0'-1.0' (**SW**) Gray; sand medium to coarse-grained; moderately sorted. 1.0'-2.0' (SW) As above; moderate petroleum odor present. 2 36.9 11.0'-13.0' 2.0' sample in split spoon. 11.0'-13.0' (SP/SW) As (hydrated) above; but not gray; no to weak hydrocarbon odor present. 13.0'-15.0' 1.0' sample in split spoon. 13.0'-14.0' (**SP/SW**) 19.2 Brownish yellow (± 10 YR) but color is not stained; sand; medium to coarse-grained; moderately sorted; H2O saturated; weak to moderate petroleum odor present. 6 8 TOTAL DEPTH: 15ft bgs **20**

DATE OF DRILLING:

11-29-00



SITE ID: **CLIMATE ROOFING** LOGGED BY: R. Sengebush **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" BOREHOLE ID: B-11 PAGE 1 OF 1 DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 15ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Fill with Bentonite. **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Fill. 0.0'-3.0' (SM) Fill; yellowish-brown (10YR); silty sand with pea gravel; (cuttings). Cement Grout 2 3.0'-5.0' 2.0' sample in split spoon. 0.0'-1.0' (SM) (10YR); silty sand; very well sorted. 1.0'-2.0' (SP/SM) (10YR); silty sand/sand; fine to medium-grained; very well sorted; damp; no apparent hydrocarbon odor present. ND 5.0'-7.0' 1.5' sample in split spoon. 0.0'-0.5' (SM) (10YR); silty sand as above. 0.5'-1.0' (**SP**) Yellowish-brown (10YR); sand; fine to medium-grained; very well sorted; dry; no 6 apparent hydrocarbon odor present. ND 7.0'-9.0' 1.5' sample in split spoon. 0.0'-0.5' (**SP/SW**) Brownish yellow (10YR); sand; medium to coarse-grained; moderately sorted; damp; no apparent hydrocarbon odor present (?). 8.0'-110 9.0' (SP/SW) As above; H2O saturated at 8.0'; gray (5Y4/1) at B-11 8.9'; moderately strong petroleum odor at 9.0'. 10.0-10 11.0' 9.0'-11.0' 1.5' sample in split spoon. 0.0'-1.5' (SP/SW) Dark 3589 (SW) gray (N5); sand; medium to coarse-grained; pebbles to 0.75" 10%; very strong petroleum odor present. 11.0'-13.0' 1.0' sample in split spoon. 0.0'-0.5' (SP/SW) As 610 above; sand; 0.5'-0.75' gray; 0.75'-1.0' light brown; moderate to (hydrated) strong petroleum odor present. 13.0'-15.0' 0.5' sample in split spoon. 0.0'-0.5' (SP/SW) Sand; 783 medium to coarse-grained gravel with 10% pebbles to 1" diameter; moderate to poorly sorted; H2O saturated; very strong petroleum odor present. 6 8 TOTAL DEPTH: 15ft bgs **20**

DATE OF DRILLING:

11-29-00



TECUMSEH PROFESSIONAL ASSOCIATES, INC.

DATE OF DRILLING: 11-29-00 SITE ID: **CLIMATE ROOFING** LOGGED BY: R. Sengebush **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" BOREHOLE ID: B-12 PAGE <u>1</u> OF <u>1</u> **DRILLING METHOD:** Hollow Stem Auger SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery WELL/BOREHOLE PID Reading (ppmv) TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~7.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 15ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: Fill with Bentonite. **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Fill. 0.0'-3.0' (SP) Fill; (10YR); sand; damp; no apparent hydrocarbon odor present. (cuttings). Cement Grout 2 3.0'-5.0' 2.0' sample in split spoon. 0.0'-1.0' (SM) (10YR); silty sand; well sorted; damp. 1.0'-2.0' (SP) (10YR) yellowishbrown; sand; fine-grained; very well sorted; damp; no apparent hydrocarbon odor present. 5.0'-7.0' 2.0' sample in split spoon. 0.0'-0.2' (ML) Slough?; ND silty sand with clay. 0.2'-2.0' (SP/SW) Yellowish-brown (10YR); sand to pebbly sand; medium to coarse-grained with up to 5-10% pebbles to 0.5"; moderately sorted; loose; damp to dry; loose; no apparent hydrocarbon odor present. ND 7.0'-9.0' 1.5' sample in split spoon. 0.0'-1.5' (**SW**) Yellowishbrown (10YR); sand to pebbly sand; medium to coarse-grained with 5% pebbles to 0.5'; moderately H2O saturated at ~7.0'; no apparent hydrocarbon odor present. ND 9.0'-11.0' 1.5' sample in split spoon. 0.0'-1.5' (SP/SW) Yellow-B-12 ND ish brown (10YR); sand; medium to coarse-grained moderately .0-10.0'10 (SW) sorted; moderately sorted; H2O saturated; no apparent hydrocar-42 bon odor present. 11.0'-13.0' 0.5' sample in split spoon. 0.0'-0.5' (SP/SW) 2 Yellowish brown (10YR); sand; medium to coarse-grained; moderately sorted; carbonized plant material at 0.3'; pebbles to 1" ND (hydrated) diameter 25%; H2O saturated; no apparent hydrocarbon odor 13.0'-15.0' 0.5' sample in split spoon. 0.0'-0.5' (SW/GP) Yel-ND owish brown (10YR); sand and gravel; moderate to poorly sorted; H2O saturated; no apparent hydrocarbon odor. 6 8 TOTAL DEPTH: 15ft bgs **20** TECUMSEH PROFESSIONAL ASSOCIATES, INC.

DATE OF DRILLING: 11-29-00 SITE ID: **CLIMATE ROOFING** LOGGED BY: R. Sengebush **CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD** BOREHOLE DIAMETER: 8" WELL ID: B-13/FTW-15 PAGE 1 OF 1 **DRILLING METHOD: HSA** SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery WELL/BOREHOLE PID Reading (ppmv) CONSTRUCTION TOP OF CASING ELEV: NA CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.0 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 15ft Laboratory CASING: 0-5' 2" dia sch 40 PVC-flush threaded SCREEN: 5-15' 0.01slot 2" dia sch 40 PVC SURFACE COMPLETION: Standard 8x12 can w/ concrete pad **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Fill. Cement 0.0'-3.0' (SM) Yellowish-brown; silty sand; medium to finegrained; poorly sorted; damp. (cuttings). 3.0'-5.0' 2.0' sample in split spoon. 3.0'-4.0' (SM) Yellowish-Bentonite Pellets 2 brown (10YR); silty sand; fine-grained; well sorted; partings (hydrated) 0.25"; dry; no apparent hydrocarbon odor present. 4.0'-5.0' (SP) Sand; fine-grained; well sorted; loose; dry; no apparent hydrocarbon odor present. ND 5.0'-7.0' 1.7' sample in split spoon. 5.3'-5.5' (**SM**) (slough?) as in 3.0'-4.0'. 5.5'-7.0' (SP) Yellowish-brown (10YR); sand; fine to medium-grained; very well sorted; loose; damp; no appar 6 0 ent hydrocarbon odor present. • ND 10-20 Silica Sand B-13 7.0'-9.0' 1.5' sample in split spoon. 7.5'-8.0' (**SP**) As above. • 8.5'-9.0' 8.0'-9.0' (SW) Yellowish-brown from 8.0'-8.5' and light gray (SW) ND from 8.5'-9.0'; sand; medium to coarse-grained; poorly sorted; H2O saturated at 8.0'; moderate hydrocarbon odor present. 10 101 9.0'-11.0' 1.0' sample in split spoon. 10.0'-11.0' (**SW**) Gray to dark gray (5Y4/1-N3); sand; medium to coarse-grained; moderately sorted; H2O saturated; moderate hydrocarbon odor present 2 57.3 Screen 11.0'-13.0' 0.5' sample in split spoon. 12.5'-13.0' (**SP/SW**) Yellowish-brown to light gray; sand; medium to coarse-grained pebbles to 0.5" diameter 5%; moderately sorted; moderate 4 hydrocarbon odor present. 33.0 13.0'-15.0' 0.5' sample in split spoon. 14.5'-15.0' (SW/GP) 6 Yellowish-brown (10YR); sand; medium to coarse-grained with 10% pebbles to 1" diameter; poorly sorted; minimum hydrocarbon odor present. 8 TOTAL DEPTH: 15ft bgs **20** TECUMSEH PROFESSIONAL ASSOCIATES, INC.

SITE ID: **CLIMATE ROOFING** LOGGED BY: **SCG CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD BOREHOLE DIAMETER: 8"** BOREHOLE ID: B-14 PAGE <u>1</u> OF <u>1</u> **DRILLING METHOD: HSA** SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: 8 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 13 ft Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: NA **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Sandy soil, pebbles, grasses. 0.0'-3.0' (SM) 10YR; silty sand; fine-grained; some pebbles from surface; moist; no apparent hydrocarbon odor present. Cement Grout 2 3.0'-5.0' 1.75' sample in split spoon. 3.25'-4.0' (SM) 10YR; 0.4 silty sand; fine to very fine-grained; loose; slightly moist; no apparent hydrocarbon odor present. 4.0'-5.0' (SM) 10YR; same as above; fine to very fine-grained; silty sand; silt 1.2 content decreasing; no apparent hydrocarbon odor present. 5.0'-7.0' 1.8' sample in split spoon. 5.2'-7.0' (**SM**) 10YR; sand; 6 very fine-grained; well sorted; little moisture; no apparent hydrocarbon odor present. 0.5 7.0'-9.0' 1.6' sample in split spoon. 7.4'-7.6' Same as 5.2'-7.0'. 7.6'-9.0' (SW) 10YR; medium-grained sand grading to coarse-Bentonite Pellets 0.9 grained; very little fine-grained; small pebbles; no apparent (hydrated) B-14 hydrocarbon odor present. 10.0-10 10.5 9.0'-11.0' 1.0' sample in split spoon. 9.0'-10.0' (SW) 10YR; (SW) 0.5 coarse-grained sand; fine to coarse-grained gravel. 11.0'-13.0' 0.8' sample in split spoon. 11.0'-11.8' (SW) Same 2 as 9.0'-11.0' above. 1.3 4 6 TOTAL DEPTH: 13ft bgs 8 **20**

DATE OF DRILLING:

12-4-00



SITE ID: **CLIMATE ROOFING** LOGGED BY: **SCG CLIENT:** DRILLER: Rodger's Drilling/H. Reichert **BCEHD BOREHOLE DIAMETER: 8"** BOREHOLE ID: B-15 PAGE 1 OF 1 **DRILLING METHOD: HSA** SAMPLING METHOD: 3" diam, 2' long Split Spoon Blowcounts/% recovery PID Reading (ppmv) WELL/BOREHOLE CONSTRUCTION TOP OF CASING ELEV: NA CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8 ft LITHOLOGY SIMPLIFIED 13 ft TOTAL DEPTH: Laboratory CASING: NA SCREEN: NA SURFACE COMPLETION: NA **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Sandy soil, grasses. 0.0'-3.0' (SM) 5YR4/6; silty sand; very fine-grained; loose; slightly moist; no apparent hydrocarbon odor present. Cement Grout 2 3.0'-5.0' 0.7' sample in split spoon. 0.3'-0.8' (SM) (10YR5/3) Silty sand; very fine-grained; dry. 0.8'-1.0' (SM) (10YR 5/3) Silty sand; very fine-grained; hard; semi-consolidated; dry; no apparent hydrocarbon odor present. 1.8 5.0'-7.0' 1.1' sample in split spoon. 0.2'-0.8' (**SM**) 10YR5/3; Silty sand; very fine-grained; dry; hard; semi-consolidated; 6 weak cementation; no apparent hydrocarbon odor present. 1.1 7.0'-9.0' 1.5' sample in split spoon. 0.2'-1.5' (**SM**) Silty sand; fine-grained; loose; some pea-size gravel; wet; no apparent hydrocarbon odor present. 1.5'-1.7' (SM) Grading to medium-Bentonite Pellets 1.3 grained silty sand; loose; some pea-size gravel; wet; (hydrated) B-15 no apparent hydrocarbon odor present. 9.5-10.0' 10 (SM) 9.0'-11.0' 1.0' sample in split spoon. 0.0'-1.0' (SM) 5YR4/6; 1.4 <5 Same as 7.0'-9.0' (1.2' recovery). 2 11.0'-13.0' 1.0' sample in split spoon. 11.0'-12.0' (SM) Same as 7.0'-9.0' (1.0' recovery). 1.1 4 6 TOTAL DEPTH: 13ft bgs 8 **20**

DATE OF DRILLING:

12-5-00



DATE OF DRILLING: 1-29-01 SITE ID: **CLIMATE ROOFING** LOGGED BY: **SCG CLIENT:** DRILLER: Nevex/S. Hanfenfeld **BCEHD BOREHOLE DIAMETER: 7"** BOREHOLE ID: B-16/FTW-16 PAGE 1 OF 1 **DRILLING METHOD: HSA** SAMPLING METHOD: 2" diam, 2' long Split Spoon Blowcounts/% recovery WELL/BOREHOLE PID Reading (ppmv) TOP OF CASING ELEV: NA CONSTRUCTION CONSTRUCTION DEPTH (in feet) TPH DEPTH TO WATER: ~8.3 ft LITHOLOGY SIMPLIFIED TOTAL DEPTH: 17 ft Laboratory CASING: 0-5' 2" dia sch 40PVC-flush threaded SCREEN: 6-17' 0.01 slot 2" dia sch 40PVC SURFACE COMPLETION: Standard 8x12can w/ concrete pad **USCS - LITHOLOGIC DESCRIPTION** Surface Conditions: Sandy soil/road base coarse. 0.0'-4.0' (SM) 5YR4/6; Fine-grained; loose; slight moisture; no apparent hydrocarbon odor present. 0.9 Cement Grout 4.0'-6.0' 1.25' sample in split spoon. 0.0'-0.7' (**SC**) 5YR 4/6; Clayey sand; fine-grained; soft; almost low plasticity; sharp 0.5 contact; slightly moist. 0.7'-1.25' (SM) Sand; fine-grained; sorted with fines; no apparent hydrocarbon odor present. 60% 10, 12,13 6.0'-8.0' 1.5' sample in split spoon. 0.0'-1.5' (SM) Sand; 0.6 0 fine-grained; soft; no apparent hydrocarbon odor present. 75% 7,6,4 × 8.0'-10.0' 1.75' sample in split spoon. 0.0'-.25' (SM) 5YR 4/6; 0.5 sand; fine-grained; moist; slight hydrocarbon odor present. 0 0 0.25'-1.75' (SW) (N3/N5) Fine to coarse-grained sand; coarsen-80% ing downwards; wet; strong hydrocarbon odor present. 3,5,6 FTW-16 1583 -9.5' 10/20 Silica Sand (SW) 10.0'-12.0' .60' sample in split spoon. 0.0'-0.6' (SP/SW) 5YR 420 30% 4/6; fine to coarse-grained sands grading from coarse-grained 4,5,8 downwards to medium and fine-grained; N3/N5 grading back to 0 5YR 4/16; odor decreasing. 0 0 6 0 TOTAL DEPTH: 17ft bgs 8 **20**

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